

Application No.: 10/616,095

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Docket No.: 245402006800

REMARKS

Claims 1-10 were pending in the present application. By virtue of this response, claims 2 and 4 have been cancelled, and claims 1, and 6-9 have been amended. Accordingly, claims 1, 3 and 5-10 are currently under consideration. Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. No new matter has been added.

Claims 1-10 stand examined and are rejected on various grounds. These objections and rejections are addressed in the appropriate sections below.

Information Disclosure Statement

Applicant clarifies that the PTO 1449 form filed on July 8, 2003, did in fact have only one sheet.

Claim Objections

Claim 6-9 are objected to by the Examiner for informalities regarding the phrase "with a layer identical . . ." Applicant has amended these claims in accordance with the Examiner's comments. Withdrawal of the objection is therefore respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claim 4 stands rejected under 35 U.S.C. § 112, first paragraph as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants respectfully traverse the rejection. In particular, it is respectfully submitted that one skilled in the art may readily practice the subject matter of original claim 4 (now incorporated into claim 1).

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For example, one skilled in the art would understand that well-known fabrication techniques, including curing, patterning and etching could be utilized. For example, referring to the structure of Figure 3, one skilled in the art would understand that the polyimide-based resin could be applied, and cured (e.g., by baking), after the second interconnection 17 is formed. Then, patterning and etching could be utilized.

The Examiner also states that it is not clear how to define a boundary between the molding insulating film and the protection film. However, while both may be formed of "a resin material" as stated by the Examiner, these layers are generally of materials that are different in some respect such that the boundary between the layers is determinable. For example, the materials may each have a different index of refraction.

Rejection Under 35 U.S.C. § 102(b) and under 35 U.S.C. § 103(a)

Claims 1-6 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JP 9-153604 (JP'604). Claims 7-9 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious over Applicants prior art ("AAPA") in view of JP'604 and/or U.S. Patent No. 6,635,912 to (Ohkubo). Applicant has amended claim 1 to include the features previously set forth in claims 2 and 4, which are now cancelled. With respect to the presently amended claims, Applicant respectfully traverses the anticipation and obviousness rejections.

In JP'604, a silicon nitride film antireflection coating 7 is formed to cover photodiode formation regions 10. Furthermore, silicon oxide film 17 is formed to cover antireflection coating 7. The film covering the antireflection coating 7 is the silicon oxide film 17, made of silicon oxide, and JP'604 does not disclose that the film covering the antireflection coating 7 includes a polyimide-based resin. The Examiner states that "at least the bottom portion of the resin layer 18 in JP'604 can be regarded as a polyimide-based resin protection film. However, the "resin layer 18" is not formed on an antireflection coating. Thus, a reliance on the "resin layer 18" in making the anticipation rejection is misplaced.

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In any event, the Examiner appears to be advancing an obviousness-type rejection (not an anticipation rejection), without a necessary suggestion or motivation. In an anticipation rejection, a feature must be disclosed in a reference, either actually or inherently disclosed. Here, the Examiner appears to be contending that the bottom portion of the resin layer could be ("can be regarded as") polyimide-based. Clearly, this feature is not actually disclosed. Furthermore, for a disclose to be inherent, the feature allegedly inherently disclosed must necessarily be present. Here, even the Examiner appears to recognize that the feature is not necessarily present.

For completeness of discussion, we also address the Ohkubo reference. In the Ohkubo reference, the semiconductor device of Fig. 1 has an antireflection coating 20 formed on the photodiode 10. The first interlayer insulating film 72 and the second interlayer insulating film 74 are formed to cover the antireflection coating 20. Then, shading film 76, composed of aluminum, is formed on second insulator film 74, except for the photodiode region. In Ohkubo, the first interlayer insulating film 72 covers antireflection coating 20. However, Ohkubo does not state that the first interlayer insulating film 72 includes a polyimide-based resin.

Thus, as discussed above, neither JP'604 nor Ohkubo disclose the feature of the protection film, formed on the antiflection coating, including a polyimide-based resin.

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CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 245402006800. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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